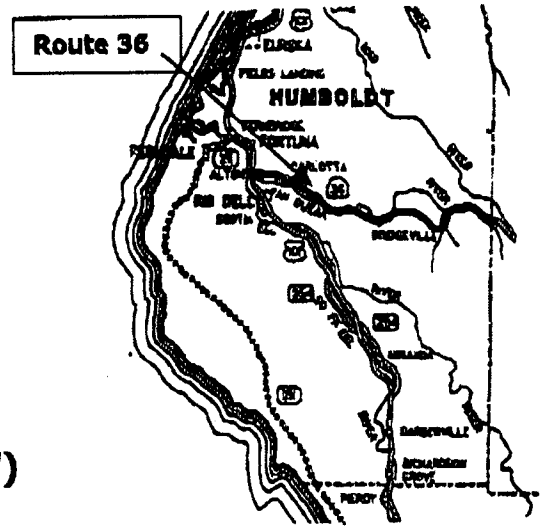
ROUTE CONCEPT REPORT



ROUTE 36 CORRIDOR

01-HUM-36-KP 0.0/73.5 (PM 0.0/45.7)

All information in this Route Concept Report is subject to change as conditions change and new information is obtained.

I approve this Route Concept Report to guide today's route development decisions and/or recommendations.

Approval Recommended:

11/19/99
F. A. WYTHE **Date**
District Division Chief
Project Coordination

Approval Recommended:

11/10/99
CHERYL S. WILLIS **Date**
District Division Chief
Planning

Approved:

11/23/99
RICK KNAPP **Date**
District Director
District 1

NOVEMBER 1999

ROUTE 36 RCR

ROUTE CONCEPT REPORT

Statement of Planning Intent

The Route Concept Report (RCR) is a planning document which describes the Department's basic approach to development of a given transportation route or corridor. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the RCR defines appropriate transportation facilities for each route or corridor. The objective of the effort is to provide a better basis for the development of the State Transportation Improvement Program (STIP), and for determination of the appropriate concept for future transportation projects.

Route Concept Reports are prepared by District staff in cooperation with local and regional agencies. They will be updated as necessary as conditions change or new information is obtained.

Route Concept Reports are a preliminary planning phase that lead to subsequent programming and the project development process. As such, the specific nature of proposed improvements (e.g., roadway width, number of lanes, access control) may change in the project development stage.

Assumptions

The following assumptions form the basis for the development of Route Concept Reports:

1. The relative importance of State highways in the District is generally based on functional classification. In general, higher priority is given to major improvements on principal arterial routes as compared to minor arterials and collectors.

2. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways which will only be maintained (since improvements would not be made to address level of service concerns).

3. Level of service calculations are based on the 1994 Highway Capacity Manual (see Appendix A).

4. Determinations of future level of service for State highways in District 1 are based in part upon Statewide and Regional forecasts of State highway travel developed by Caltrans.

5. Route concepts are generally uniform for an entire route or corridor, unless there is a major change in function along the route or corridor.

6. Major projects will be developed to meet standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" will be prepared during the project development process.

7. Safety projects will be pursued on an on-going basis in order to be responsive to safety concerns as they are identified.

8. No planned or programmed improvements were assumed to be complete in analyzing present and future operating conditions. The Route Concept Report details programmed improvements in the 1998 STIP, with all costs in 1998 dollars.

9. An environmental document will not be required for Route Concept Reports. However, individual improvement projects identified in Route Concept Reports will follow the appropriate environmental process as required by law.

ROUTE CONCEPT REPORT

ROUTE 36

01-HUM-36-KP 0.0/73.5 (PM 0.0/45.7)

I. ROUTE CONCEPT AND RATIONALE

FACILITY CONCEPT

The Concept for Route 36 in Humboldt County is 2-lane Conventional Highway on existing alignment. Improvements will be made to the extent Special Public Lands Funds are made available. We will continue to submit candidates for the discretionary funds (which are not available for major routes).

Route 36 is a significant regional east-west Route serving Humboldt County for trips between the Pacific Coast and the Sacramento Valley. The Route serves generally small, sparsely populated communities (Carlotta, Bridgeville and Forest Glen), as well as supporting a substantial amount of logging, agricultural and recreational traffic. The Route originates at its junction with Route 101 in the community of Alton and proceeds along the Van Duzen River Valley through Grizzly Creek State Park to end at its junction with Route 395 at Susanville.

Route 36 is important as a recreational and commercial route and as a local service route for a few small communities. It is a possible alternative for Route 299 in case of closure due to winter storms or construction.

LEVEL OF SERVICE CONCEPT

No concept Level of Service has been selected for Route 36.

Level of service decreases are anticipated as traffic volumes increase; however, no improvements will be made to address level of service reductions.

ROUTE CONCEPT FUNCTION

This Route Concept should serve as a guide for long range planning of Route improvements. It recognizes financial considerations and competing priorities on this Route and other routes in the District. Efforts have been made to consider local and regional concerns regarding development on the route. It will protect the state's investment in Route 36, while recognizing financial constraints, which will not allow the programming of extensive improvements for all highways.

II. ROUTE MANAGEMENT STRATEGIES

REHABILITATION STRATEGY

Route 36 should be maintained as necessary, and rehabilitated as necessary from Route 101 to Bridgeville.

Based on functional classification, traffic volumes, and maintenance service levels, Route 36 in District 1 should be rehabilitated as necessary on existing alignment at (HUM-36-KP 0.0/39.9 (PM 0.0/24.8)) and the remainder (HUM-36-KP 39.9/73.5 (PM 24.8/45.7)) should be maintain only. Portions of the Route designated as "maintain only" may be rehabilitated on an exception basis when maintenance of the route would be less cost effective than rehabilitation. Widening may be considered in conjunction with rehabilitation projects

Current (3-R) rehabilitation standards in the Caltrans Highway Design Manual indicate that Route 36 is wide enough to permit rehabilitation at present width over most of segments with "rehabilitate as necessary" concepts. Widening segments, which do not meet 3-R width standards, may not be prudent for the following reasons:

1. Costs to widen narrow sections would be inordinately high because of rugged terrain.

2. Existing vertical and horizontal alignment does not meet current standards.

3. Environmental impacts would be significant. Old growth redwood trees exist at a number of locations, including Grizzly Creek Redwoods State Park.

4. Committing extensive funds for widening in conjunction with correcting pavement deficiencies would divert funds from higher priority capital improvement on other routes.

This Route may be resurfaced, as necessary, through the Capital Preventative Maintenance Program (CAPM).

SAFETY AND OPERATIONAL IMPROVEMENT STRATEGY

One segment of Route 36 has an accident rate greater than 1.5 times (150%) of the expected Statewide average:

HUM-36-KP 0.0/18.5 (PM 0.0/11.5)

The above segment of Route 36 has accident rates slightly exceeding one and one-half times the statewide average based on similar facilities. **Safety improvements at spot locations will be considered as necessary.**

Bridge replacement, storm damage and operational improvement projects will also be considered when necessary. These projects, in addition to safety projects, should be constructed to appropriate State and Federal standards.

In the late 1980's, Caltrans barrier striped two-lane highways to comply with Federally mandated standards. This reduced the number of passing opportunities (and the level of service) on most two-lane State highways, including Route 36. The impact of barrier striping is expected to be less severe on Route 36 than on some other Routes within the District, since few passing opportunities existed prior to barrier striping.

GOODS MOVEMENT STRATEGY

Route 36 is a major all-weather Route serving the Van Duzen River Valley. It is used to transport food and other essential supplies to communities along this corridor, and to transport goods to market.

Consistent with the relatively low truck traffic volumes on this Route, goods movement improvement emphasis is on Route safety and reliability.

NON-MOTORIZED FACILITIES STRATEGY

Shoulders on Route 36 are relatively narrow in many locations, and not well suited to non-motorized traffic.

Bicycle and pedestrian activity is generally concentrated in communities along the Route (e.g. Hydesville, Carlotta, Bridgeville, etc.). The communities of Hydesville and Bridgeville have identified pedestrian and bicycle needs which increase visibility, circulation and safety. Caltrans will work with Humboldt County Association of Governments (HCAOG) to improve bicycle and pedestrian facilities in the Route 36 corridor.

CORRIDOR PRESERVATION STRATEGY

It is anticipated that Route 36 will remain a conventional 2-lane highway, on existing alignment. No substantial long-term right of way needs are anticipated.

III. ALTERNATIVE CONCEPTS CONSIDERED

No alternative concepts were considered for Route 36 in District 1.

IV. ROUTE ANALYSIS

DESCRIPTION

Route 36 begins at Route 101 approximately 27 kilometers (17 miles) south of Eureka at Alton. Within District 1 the route traverses Humboldt County easterly along the Van Duzen River basin. It continues into District 2, intersecting Interstate 5 in Tehama County, and terminating in Lassen County at Susanville. Route 36 is approximately 75.3 kilometers (45.7 Miles) in length within District 1. The post mile description is 01-HUM-36-KP 0.0/75.3 (PM 0.0/45.7).

ROUTE PURPOSE

Route 36 serves several small unincorporated communities in Humboldt County for access to US 101 and the Sacramento Valley (Interstate 5). Historically, one of the principal functions of the Route has been its use as a logging and chip truck route. Much of the land accessible by Route 36 is used for timber production. This Route also serves as access to cattle and sheep ranches in eastern Humboldt County. During the summer months Route 36 has extensive recreational traffic. Non-motorized traffic is concentrated in the small towns along the route. Although designated as a scenic route, its potential as a bicycle route is limited due to roadway geometry.

ROUTE SEGMENTATION

Route 36 is segmented as follows for System Planning purposes:

TABLE 1
ROUTE 36 SEGMENTATION

SEG #	HUM-36 KP	HUM-36 PM	DESCRIPTION
1	0.0/18.5	0.0/11.5	Rte 101 to Hely Creek Bridge
2	18.5/39.9	11.5/24.8	Hely Creek Bridge
3	39.9/75.3	24.8/45.7	Bridgeville to Trinity Co. Line

LAND USE

In Humboldt County from Alton where Route 36 commences to just outside of Carlotta the route passes through agricultural land and many low-density residential areas. From Carlotta to the Trinity County line land use is primarily agricultural, ranching, timber production and scattered low density residential uses.

EXISTING FACILITIES

Table II below will summarize existing facility characteristics for the Route 36 corridor in District 1:

TABLE II
ROUTE 36 EXISTING FACILITY CHARACTERISTICS

SEG #	HUM-36 KP	HUM-36 PM	DESCRIPTION	EXISTING FACILITY
1	0.0/18.5	0.0/11.5	Rte 101 to Hely Creek Bridge	2-C
2	18.5/39.9	11.5/24.8	Hely Creek Bridge	2-C
3	39.9/75.3	24.8/45.7	Bridgeville to Trinity Co. Line	2-C *

* A portion of segment 3 has no centerline stripe.

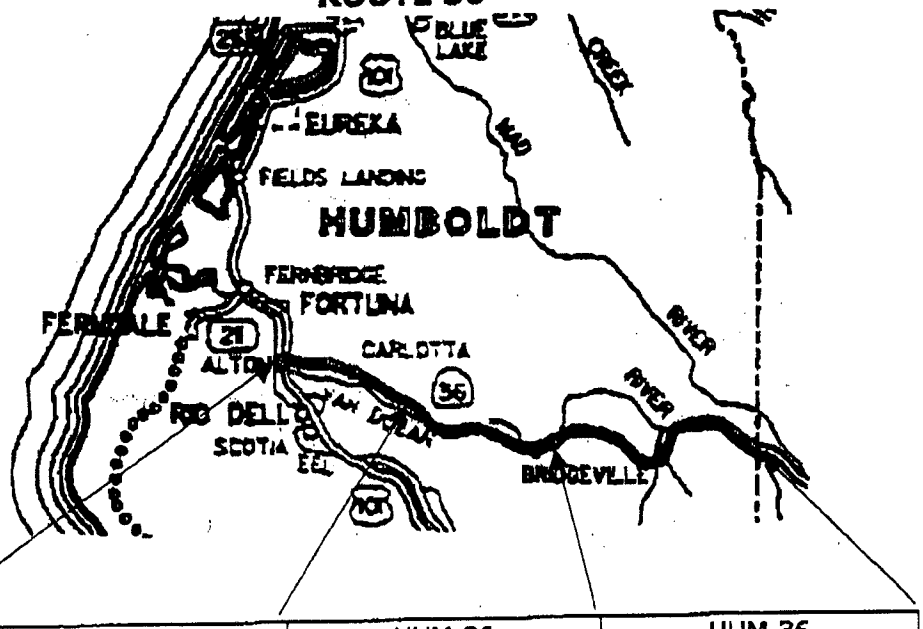
F = Freeway
E = Expressway
C = Conventional

Functional Classification:	Minor Arterial
Eligible for Federal Funding	Yes
Freeway and Expressway System:	No
Eligible for Scenic Highway Designation:	Yes
Subsystem of Highways for Extra Legal Loads (SHELL)	No
Surface Transportation Assistance Act (STAA) Trucks Allowed:	No
Strategic Highway Network:	No
National Highway System:	No
Interregional Road System:	No
Public Airports Served:	Dinsmore (General Aviation)
Rail Service	None
Intercity Bus Service:	None
Intersecting State Highway Routes:	101
Park and Ride Lots	None

OPERATING CONDITIONS

Present and future operating conditions, including traffic volume ranges, level of service, and volume to capacity ratios for both existing and anticipated future conditions for Route 36 are shown on Map 1 on the following page. Further information regarding specific operating and geometric conditions may be found in Caltrans source documents (e.g., the State Highway Inventory, the State Highway Log, and Traffic Volumes on California State Highways, etc.)

MAP 1
PRESENT AND FUTURE OPERATING CONDITIONS
ROUTE 36



HUM-36	HUM-36	HUM-36
KP 0.0/18.5	KP 18.5/39.9	KP 39.9/75.3
PM 0.0/11.5	PM 11.5/24.8	PM 24.8/45.7
Terrain: Rolling	Terrain: Rolling	Terrain:Mountainous
Gradeline: Rolling	Gradeline: Rolling	Gradeline: Moderate
Existing (1998)	**Existing (1998)**	**Existing (1998)**
2-lane Conventional	2-laneConventional	2-lane Conventional
3.3 TO 3.6 m lanes	3.3 TO 3.6 m lanes	3.3 TO 3.6 m lanes
6.7-13.9 m paved	6.7-13.9 m paved	6.7-13.9 m paved
2100-3,500 AAD	1250-2,100 AADT	700-900 AADT
LOS "C"	LOS "D"	LOS "C"
V/C = 0.27	V/C = 0.39	V/C = 0.22
Accident Rate = greater than 1.5 times the Statewide average	Accident Rate = less than 1.5 times the Statewide average	Accident Rate = less than 1.5 times the Statewide average
Trucks = 7%-14%	Trucks = 8%-15%	Trucks = 15%
Future (2020)	**Future (2020**	**Future (2020**
2,950-4150 AADT	1750-2950 AAD	900-1250 AADT
LOS "D	LOS "E	LOS "D
V/C = 0.39	V/C = 0.56	V/C = 0.32

PROGRAMMED IMPROVEMENTS

An interchange at the Intersection of Routes 101 and 36 is programmed in the 1998 State Transportation Improvement Program (STIP) at an estimated cost of $12.8 Million (construction, Right of Way and support costs). The 1998 State Highway Operation and Projection Plan (SHOPP) includes storm damage projects programmed with a total estimated cost of over $4 Million. A SHOPP resurfacing project is programmed with an estimate cost of just over $2.5 Million.

with a total estimated cost of over $4 Million. A SHOPP resurfacing project is programmed with an estimate cost of just over $2.5 Million.

V. ENVIRONMENTAL CONSIDERATIONS

Principal environmental concerns along Route 36 include:

- Significant archaeological and cultural sites where the local Native American tribes gathered food and materials necessary for everyday life, sites where their ancestors lived and are buried and sacred sites associated with religious activity.

- The Van Duzen River, a recreational wild and scenic river, provides important instream and riparian habitat. There are sensitive species associated with the river and its tributaries including a variety of federally listed plants and animals. There are old growth redwood groves at several locations along the Route as well as other visual resources associated with Wild and Scenic River Corridors.

- Soil stability is a factor for concern along many areas of Route 36. Soil instability may cause slides and slip outs which could result in delays and/or road closures.

- The water quality in the Van Duzen River is of significant concern.

- There are numerous historic resources (most towns along the cc. 1875 stage route) and prehistoric resources (various flat areas along the Van Duzen River basin, the Larabee Valley and the town of Bridgeville).

VI. REGIONAL TRANSPORTATION PLANNING

The 1996/98 Humboldt County Regional Transportation Plan authored by the Humboldt County Association of Governments (HCOAG) calls for long term maintenance of State Highway Routes. Maintenance issues were noted as follow:

1. Some improvement is necessary to alignments, grades and safety, particularly in areas where the highway does not meet current standards.

2. Passing lanes are needed in some areas to mitigate barrier striping.

3. Capacity improvements are recognized as not likely, on this route.

VII. AREAS OF CONCERN

The following criteria are used to identify areas of concern on Route 36 based on an analysis of level of service and accident history:

1. A segment is considered to be a "level of service concern" if the concept level of service (LOS) will not be achieved under present or future traffic conditions or the segment operates at capacity during peak hour.

2. A segment is considered to be a "safety concern" if the total accident rate for a five year period for that segment exceeds one and one-half times the Statewide average for similar facilities.

Based on these criteria, one segment: Hum-36-KP 0.0/18.5 (PM 0.0/11.5) has been identified as a safety concern. The District has an established accident surveillance and monitoring process, which investigates and recommends safety improvements for specific locations with historic accident concerns as they are identified.

VIII. IMPROVEMENTS NECESSARY TO ACHIEVE THE ROUTE CONCEPT

Consistent with the route concept of Maintain Only with some rehabilitation, no new facility improvements will be required. Safety improvements should be made, as necessary and operational improvements should be considered on a limited basis.

IX. TRANSIT AND HIGH OCCUPANCY VEHICLE (HOV) CONSIDERATIONS

Low population densities make it difficult to provide cost-effective transit services for Route 36. Due to the rural nature of Route 36, and relatively low peak hour traffic volumes during commute hours, no HOV considerations are necessary.

X. ACCESS MANAGEMENT

Access management involves managing where vehicles are allowed to enter the highway, to improve highway operations and reduce accidents.

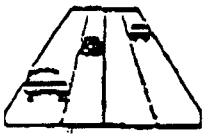
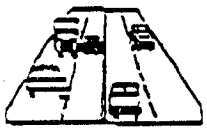
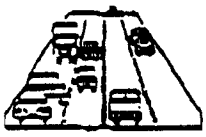
While some access openings may have less than desirable sight distance, access management is generally not a concern along most of Route 36. Further, with little change in land use anticipated, access management is not likely to be a future concern.

XI. ADOPTIONS, RESCISSIONS AND RELINQUISHMENTS

New or changed highway routings generally require adopting a new route and rescinding the previously adopted route. The Route may also be relinquished to a city, county or other public entity.

No significant adoptions, rescissions, or relinquishments are anticipated on Route 36 in District 1.

APPENDIX A
LEVEL OF SERVICE FOR HIGHWAY SEGMENTS

Level of Service		Description of Typical Traffic Conditions	Technical Descriptors: Delay	Technical Descriptors: Service Rating
A		Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed, and a high level of comfort and convenience.	None	Excellent
B		Stable traffic flow - speed becoming slightly restricted. The presence of others in the traffic stream begins to be noticeable. Low restriction on maneuverability.	None	Very Good
C		Stable traffic flow, but less freedom to select speed, change lanes, or pass. Comfort and convenience decreasing as density increases.	Minimal	Good
D		Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Reduced maneuverability, driver comfort, and convenience.	Minimal	Adequate
E		Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort and convenience.	Significant	Fair
F		Forced traffic flow. Speed and flow may drop to zero with high densities. Queues tend to form behind such locations since arrival flows exceed traffic discharges.	Considerable	Poor